

A3 sub 3C4D
20. The air handling unit of claim 17 wherein a second hinged panel is connected by a living hinge to second end piece of the one frame opening and wherein said latching means is arranged to act between the two hinged panel to secure the hinged panels in a closed position.

REMARKS

Applicants' have carefully reviewed the Examiner's rejection of claims 1-16 under 35 USC 102 and 103. In response to the rejection, Applicants' have cancelled the original entered claims and have entered claims 17-20. It is believed the newly added claims better define the invention over the prior art of record.

Applicants' present invention involves a newly developed air handling system that sharply reduces energy losses in conditioned air that is being conducted through the system. As set forth in the present application this result is achieved by building the system in sections with each section having a three dimensional frame and rectangular end pieces that are joined at the corners by beams of uniform length. The top, bottom and side openings of each frame are closed by insulated panels that are latched in place against collapsable seals to prevent air from leaking from each of the frame sections.

Most air handling systems have various types of equipment mounted inside the passageway which require periodic attention necessitating access to the equipment. Most often, to gain access to the internal equipment sections of the passageway must be broken down and then reassembled when the servicing is complete. As set out in the present application, Applicants' provide the necessary access by hinging one or more of the insulating panels to a frame section using a living hinge. The living hinge provides a continuous thermal barrier along the hinged edge of the panel and can be integrally joined to a plastic perimeter member of one end piece. More importantly, the hinged panel can be of the same construction as the other unhinged frame panels and can utilize the same seal arrangement as used with the other closure panels thereby eliminating the need of special parts or the like.

The Lackey et al. reference relates to a low cost portable refrigerator having a rectangular shaped housing the sides of which are constructed from a single sheet of foam material (see Fig. 5). The rear of the housing is closed by a block of foam

material containing an evaporator coil. A plastic breaker strip 50 surrounds the front opening of the housing and a door is hinged to the breaker ship using a living hinge.

The Lackey et al. reference relates to a refrigerator rather than an air handling system for conducting condition air. The Lackey et al. refrigerator does not utilize three dimensional rectangular frame sections having top, bottom and side openings that are closed by insulated panels. The foam parts of the Lackey et al. refrigerator are held together by elongated bolts that are passed through the foam parts. It is respectfully submitted this construction can not provide the strength required of an air handling system. Although, the door of the Lackey et al. refrigerator is provided with a living hinge, there is no suggestion in the Lackey et al. disclosure how this type of hinge might be used in an open frame section so that one of the panels used to close the openings in the section can be used to provide access to the interior of the passage while at the same time utilizing the same sealing and latching arrangement as used by the other fixed closure panels.

The Kordes reference discloses a method of constructing an insulated door for a refrigerator. Like the Lackey et al. reference there is no disclosure in this reference involving the use of three dimensional rectangular open frame sections to construct a passage for conducting conditioned air. The reference is also lacking in any teaching relating to filling the openings in the frames with insulated panels that are arranged to close against collapsable seals mounted on the inside of the frame. Finally, this reference does not suggest the use of a living hinge to convert one of the panels into an access door in a way such that no structural charges have to be made in the construction of the air handling system.

For the reasons stated above, it is respectfully suggested that neither reference taken alone or in combination render the newly added claims unpatentable. Accordingly, Applicants' respectfully request that the Examiner find the claims allowable and pass the case to issue.

Applicants' have enclosed a copy of drawing figures 3 and 4 showing a proposed amendment to the drawings in red. More specifically, subject to the approval of the Examiner, Applicants' wish to add the numeral 34 to Figs. 3 and 4 indicating a mechanism used to latch the panel 14 to the frame. Upon a finding of allowable subject matter amended drawings will be submitted.

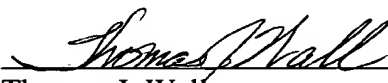
Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned **"Version with markings to show changes made."**

If the Examiner believes that contact with Applicant's attorney would be advantageous toward the disposition of this case, the Examiner is herein requested to call Applicant's attorney at the phone number noted below.


The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-0289.

Respectfully submitted,

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PATENT TRADEMARK OFFICE

"VERSION WITH MARKINGS TO SHOW CHANGES MADE."

In the Specification:

Paragraph beginning at line 23 of page 3 has been amended as follows:

Referring to Fig. 5, living hinge 22 is shown in more detail. Living hinge 22 is preferably one-piece with panel perimeter 30. Panel perimeter 30 is shaped to hold first and second [sides] covers 42, 44 of wall panel 14 [s] a specified distance apart. An interior 46 of wall panel 14 is preferably filled with a curable polyurethane foam which adhesively connects first and second [sides] covers of wall panel 14 to panel perimeter 30. First and second [sides] covers are preferably of sheet metal, while panel perimeter 30 is of a material such as nylon reinforced plastic or other plastic which has low thermal conductivity but retains enough flexibility so that repeated uses of living hinge 22 does not cause cracking or breaking of hinge portion 26.

In the Claims:

Claims 1-16 have been cancelled.

Claims 17-20 have been added.